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EXAMINER

RIDLEY, BASIA ANNA

ART UNIT PAPER NUMBER

1764

DATE MAILED: 02/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/522,179

Applicant(s)

CHAPUS ET AL.

Examiner

Basia Ridley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/935,896.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 120 to Application No. 08/935,896, filed on 23 September 1997.

The examiner notes that instant application appears to be a division, and not a continuation, of Application No. 08/935,896. A later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming only subject matter disclosed in an earlier or parent application is known as a divisional application or "division." The divisional application should set forth only that portion of the earlier disclosure which is germane to the invention as claimed in the divisional application.

The specification should be amended to include correct claim for domestic priority under 35 U.S.C. 120 and to include current status of all referenced nonprovisional parent applications, such as "This Application is a divisional of U.S. Patent Application Serial No. 08/935,896 filed on 23 September 1997, now Patent No. 6,187,173."

Claim Objections

2. Claims 11-14 are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

3. Claim(s) 11-14 are objected to because of the following informalities:

- claim 11 recites “a line supplying hydrogen”, in line 5, suggested correction is --at least one line for supplying hydrogen--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim(s) 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim(s) 11 recite(s) the limitation(s) “the purification”, line(s) 1. There is insufficient antecedent basis for said limitation(s) in the claim(s).

Claim(s) 11 recite(s) the limitation(s) “the reactor” or “said reactor”, line(s) 5 and 6. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --the at least one hydrogenation reactor-- or --said at least one hydrogenation reactor--, respectively.

Claim(s) 11 recite(s) the limitation(s) “said effluent outlet line”, line(s) 7. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --said at least one effluent outlet line--.

Claim(s) 11 recite(s) the limitation(s) “the drum”, line(s) 7. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --the at least one stabilization drum--.

Claim(s) 11 recite(s) the limitation(s) “the effluent”, line(s) 8. There is insufficient antecedent basis for said limitation(s) in the claim(s).

Claim(s) 11 recite(s) the limitation(s) “said reactor”, line(s) 10. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --said at least one sweetening reactor--.

The term(s) “close thereto”, claim(s) 11, line(s) 11, is/are relative term(s) which renders said claim(s) indefinite. Said term(s) is/are not defined by said claim(s), the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. How close or far should the at least one oxidizing agent supply line be to the at least one sweetening reactor to on the claimed invention?

Claim(s) 11 recite(s) the limitation(s) “the effluent”, line(s) 12. There is insufficient antecedent basis for said limitation(s) in the claim(s).

Claim(s) 11 recite(s) the limitation(s) “the sweetening reactor”, line(s) 12-13. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --the at least one sweetening reactor--.

Claim(s) 11 recite(s) the limitation(s) “said drum”, line(s) 13. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --said at least one drum for degassing effluent--.

Claim(s) 12-14 recite(s) the limitation(s) “the hydrogenation reactor”. There is insufficient antecedent basis for said limitation(s) in the claim(s). Suggested correction is --the at least one hydrogenation reactor--.

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In claim(s) 12-14 the recitation(s) “line (...) for recycling (...) to the hydrogenation reactor”, is/are vague and indefinite because said recitation(s) does/do not allow one skilled in the art to ascertain that which may, or may be not, be readable thereon. The applicant has not established the origin for said line for recycling.

6. Claim(s) 11-14 is/are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationship(s) of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationship(s) is/are:

- the relationship(s) between the at least one selective hydrogenation reactor and the at least one stabilization drum, as recited in line(s) 6 of claim(s) 11, as term(s) “being followed” does/do not define said relationship(s);
- the relationship(s) between the at least one sweetening reactor and other elements recited in the claims, as term(s) “passing into”, as recited in line(s) 9 of claim(s) 11, or “having close thereto”, as recited in line(s) 10-11 of claim(s) 11, does/do not define said relationship(s);
- the relationship(s) between the recycling lines, as recited in claim(s) 12-14, and other elements recited in the claims, as the applicant has not established the origin for said lines for recycling. what recited elements are connected by said lines for recycling.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim(s) 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frame et al. (USP 5,064,525) in view of Cooper et al. (USP 5,865,989).

Regarding claim(s) 11-14, Frame et al. disclose(s) similar apparatus comprising:

- at least one selective hydrogenation reactor containing at least one fixed catalyst bed, wherein feed and hydrogen are supplied into said at least one selective hydrogenation reactor and wherein effluent is removed from said at least one selective hydrogenation reactor (abstract, C5/L11-22);
- said reactor being followed by at least one stabilization drum, wherein effluent from said at least one selective hydrogenation reactor is supplied into said at least one stabilization drum and wherein effluent is removed from said at least one stabilization drum (C11/L43-C12/L17);
- wherein effluent from said at least one stabilization drum is supplied into at least one sweetening reactor and wherein effluent is removed from said at least one sweetening reactor (abstract, C11/L43-C12/L17);
- said at least one sweetening reactor having close thereto at least one oxidizing agent supply line (C12/L3-17);
- said apparatus further comprising at least one line for recycling stabilized effluent to the hydrogenation reactor (C11/L43-50).

While Frame et al. does not explicitly disclose various inlet and outlet lines, as the reference discloses feeds entering and products and byproducts leaving recited reactors and drums (as set forth above) a presence of said inlet and outlet lines is inherent.

Frame et al. does not explicitly disclose at least one drum for degassing the effluent from the sweetening reactor. Further, the reference does not explicitly disclose at least one line for

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recycling effluent from said at least one drum for degassing the effluent from the sweetening reactor to the hydrogenation reactor

Cooper et al. teaches that it is conventional to treat the effluent from sweetening reactor in a degassing drum and to recycle at least a portion of said effluent to the untreated feed. The recycling of a portion of the treated product into untreated feed dilutes pollutant concentration in said feed and improves the properties of final product. The nitrogen from the treated product is removed in the degassing drum for the purpose of improving solubility of oxygen in the feed and improving the properties of final product (abstract and C1/L63-66):

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add at least one drum for degassing the effluent from the sweetening reactor and to recycle at least a portion of the effluent from said at least one drum for degassing the effluent from the sweetening reactor to the untreated feed, as taught by Cooper et al. in the apparatus of Frame et al., for the purpose of improving the performance of said apparatus by improving properties of final product.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Conclusion

10. In view of the foregoing, none of the claims are allowed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (703) 305-5418. The examiner can normally be reached on Monday through Thursday, from 8:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (703) 308-6824.


The fax phone number for Group 1700 is (703) 872-9311 (for Official papers after Final), (703) 872-9310 (for other Official papers) and (703) 305-6078 (for Unofficial papers). When filing a fax in Group 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Basia Ridley
Examiner
Art Unit 1764



BR
January 25, 2003



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700